CONTENTS

SECTION A—VOL. LXII

No. 1—July 1965

PAGE

The New Physiology of Vision. Chapter XVIII. The Visual Synthesis of Colour . . . . . Sir C. V. Raman 1

The New Physiology of Vision. Chapter XIX. Perception of Colour and the Trichromatic Hypothesis . . . . . Sir C. V. Raman 10

Investigations on Multiply Charged Nuclei of the Primary Cosmic Radiation Near the Geomagnetic Equator Using Nuclear Emulsions. Part II. The Charge Spectrum of Nuclei of Energy $E \geqslant 7{\cdot}5$ Gev./Nucleon . . . . . G. D. Badhwar, N. Durgaprasad and B. Vijayalakshmi 17

Internal Conversion Coefficients of E2 Transitions . . . . . S. Swarnagowri and M. K. Ramaswamy 34

Polymerization of Vinyl Monomers. I. Dye-Reducing Agent Photosensitizing Systems . . . . . M. Santappa and A. I. Md. Sheriff 56

No. 2—August 1965

The New Physiology of Vision. Chapter XX. Superposition and Masking of Colours . . . . . Sir C. V. Raman 67

The New Physiology of Vision. Chapter XXI. The Green Colour of Vegetation . . . . . Sir C. V. Raman 73

The Propagation in Space of Cosmic-Ray Helium Nuclei and the Slope of Their Energy Spectrum . . . . . M. V. Krishna Apparao 78

Proton Magnetic Resonance Studies of the Association of Amino Methyl Pyridines . . . . . M. M. Dhingra, G. Govil, C. L. Khetrapal and K. Venkata Ramiah 90

X-Ray Spectroscopic Study of the Thiomalic Acid Complex of Cobalt . . . . . Chintamani Mande and A. R. Chetal 97

On the Fluorescence Spectrum of Uranyl Ion Contained in Some Rare-Earth Chlorides . . . . . R. M. Dixit 104

Effects of Dissociation or Ionization on Hypersonic Flow Past a Cone . . . . . Girishwar Nath 112

No. 3—September 1965

PAGE

The New Physiology of Vision. Chapter XXII. The Colours of Flowers . . . . . Sir C. V. Raman 125

The New Physiology of Vision. Chapter XXIII. The Colours of the Roses. . . . . . Sir C. V. Raman 133

Geomagnetic Activity and Diurnal Variation of Cosmic Ray Neutron Intensity . . . D. S. R. Murty, Y. Nagabhushanam and K. Ramanuja Rao 139

The Sequence of Primes . . . . . S. Ducray 145

Polymerization of Vinyl Monomers. II. Ceric-Formaldehyde Redox System . . . . . M. Santappa and V. S. Ananthanarayanan 150

Potential Constants, Mean Amplitudes of Vibration, and Thermodynamic Properties of Ethylene Oxide, Ethylene Oxide-d_4 and Ethylene Sulphide . . . . K. Venkateswarlu, S. Mariam and Miss Mariamma P. Mathew 159

Raman and Infra-Red Spectra of Crystalline Potassium Sulphamate . . . . . R. S. Katiyar 169

No. 4—October 1965

The New Physiology of Vision. Chapter XXIV. Floral Pigments and the Perception of Colour . . . . . Sir C. V. Raman 177

The New Physiology of Vision. Chapter XXV. The Colours of Natural and Synthetic Gemstones . . . . . Sir C. V. Raman 183

Characteristics of π^--Nucleon Collisions at a Primary Energy of 4·4 GeV . . . . . P. K. Malhotra 189

Calculation of the Phases of the Structure Amplitudes by Fourier Transformation of the Sum, Product and Minimum Functions . V. I. Simonov 213

Chemical Examination of the Leaves of *Rhododendron grande* Wight . . . . . S. Rangaswami and P. Venkateswarlu 224

Polarographic Behaviour of Resacetophenone Oxime . . . . . V. Seshagiri, Y. Krishna Reddy and S. Brahmaji Rao 231

No. 5—November 1965

PAGE

The New Physiology of Vision. Chapter XXVI. Structural Colours . . . . . Sir C. V. Raman 237

The New Physiology of Vision. Chapter XXVII. The Colours of Interference . . . . . Sir C. V. Raman 243

Possible Splitting of Energy Levels of Atoms or Ions in Octahedral Crystals Due to Sets of Equivalent Neighbouring Defects . . Putcha Venkateswarlu 249

Birkhoff's Rings in the Restricted Problem of Three Bodies in a Three-Dimensional Co-ordinate System . . . . . Ram Kishore Choudhry 252

Diffraction of Sound Pulses by a Rigid Cylinder in an Inhomogeneous Medium . . . . . Ramanand Jha and Surya Kant Mishra 271

A Study of the Action of Iodine and Silver Acetate on Flavanones . . . . . A. C. Jain, P. D. Sarpal and T. R. Seshadri 293

No. 6—December 1965

The New Physiology of Vision. Chapter XXVIII. Observations with a Neodymium Filter . . . . . Sir C. V. Raman 307

The New Physiology of Vision. Chapter XXIX. The Reproduction of Colour. . . . . Sir C. V. Raman 310

$^2\Sigma^- \rightarrow X^2\Pi$, Band System in PO Molecule . . . . . N. A. Narasimham, M. N. Dixit and V. Sethuraman 314

Investigations on the Multiply Charged Nuclei of the Primary Cosmic Radiation Near the Geomagnetic Equator Using Nuclear Emulsion. Part III. The Light Nuclei of the Cosmic Radiation . . . N. Durgaprasad 330

Flow of a Reiner-Rivlin Fluid between Two Concentric, Rough Circular Cylinders Rotating about Their Common Axis . . . . . P. L. Bhatnagar and D. K. Mohan Rao 347

The Bivariate Gamma Distribution and the Random Walk Problem . . . . . R. Srinivasan 358